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August 19, 2020

VIA ECFS

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th St. SW, Room TW-B204
Washington, DC 20554

Re: *Notice of Ex Parte*: Use of the 5.850-5.925 GHz Band, ET Docket No. 19-138

Dear Ms. Dortch:

On August 17, 2020, representatives of the 5G Automotive Association ("5GAA") spoke by telephone with Bill Davenport, Chief of Staff and Senior Legal Advisor to Commissioner Geoffrey Starks, regarding the record in the above-referenced proceeding. The following representatives of 5GAA member companies participated in the call:

- Ford Motor Company: John Kwant and Nick Baracos
- Fiat Chrysler Automobiles: Sushanta Das
- Audi of America: Brad Stertz
- Qualcomm: Dean Brenner and John Kuzin
- Samsung: Robert Kubik
- Nokia: Jeffrey Marks
- Panasonic: Paul Schomburg and Mike Stelts

5GAA was also represented by Mark Settle and the undersigned, both of Wilkinson Barker Knauer, LLP.

The 5GAA representatives summarized the growing momentum for direct Cellular Vehicle-to-Everything ("C-V2X Direct") communications.[1] Ford Motor Company plans to deploy C-V2X Direct throughout its vehicle fleet pending favorable Commission action in this proceeding, and many other automakers, including Fiat Chrysler,[2] BMW,[3] Jaguar Land Rover,[4] and Tesla,[5] among others, also have endorsed this technology. This growing momentum is also reflected in planned and operational infrastructure deployments of C-V2X Direct technology in

[1] Cellular Vehicle-to-Everything ("C-V2X") leverages 4G and soon 5G technologies to support two complementary communications modes: C-V2X Direct (called PC5 in Third Generational Partnership Project ("3GPP") specifications) and C-V2X network communications (called Uu in the 3GPP specifications). C-V2X Direct mode enables (1) vehicle-to-vehicle communications, which are used to communicate safety information between nearby vehicles to prevent collisions; (2) vehicle-to-roadside infrastructure communications (e.g., traffic signals, variable message signs, etc.), which are used to communicate safety and traffic information, prevent accidents associated with roadway conditions, and improve traffic efficiency; and (3) vehicle-to-pedestrian communications, which are expected to be used to communicate safety information between vehicles and other road users, such as pedestrians, bicyclists, scooter riders, etc., to prevent accidents. To augment these direct communications, C-V2X's network mode capabilities allow vehicles to communicate with the rest of the world through cellular networks.

[2] Comments of FCA US LLC, ET Docket No. 19-138, at 2 (filed Mar. 9, 2020).

[3] Comments of The BMW Group, ET Docket No. 19-138, at 1-2 (filed Mar. 9, 2020) (noting that C-V2X Direct is "ready for integration into [BMW's] next generation of communication platforms").

[4] Comments of Jaguar Land Rover Limited, ET Docket No. 19-138, at 3 (filed Mar. 9, 2020).

[5] Comments of Tesla, Inc., DOT-OST-2018-0210, at 1 (filed Jan. 31, 2019) (supporting expansion of the current rules to allow C-V2X Direct operations in the 5.9 GHz band).

Colorado,[6] Georgia,[7] Michigan,[8] Virginia,[9] and—most recently—Hawaii, which received a $6.8 million grant earlier this summer from the United States Department of Transportation for implementation of a C-V2X Direct infrastructure project.[10] The 5GAA representatives also summarized the momentum for C-V2X Direct internationally. Most notably, China has already allocated 5.9 GHz spectrum for C-V2X Direct,[11] and Chinese automakers are moving forward with plans to mass-produce vehicles equipped with this technology.[12]

Along these lines, the 5GAA representatives reiterated their appreciation to the Commission for adopting a Notice of Proposed Rulemaking proposing to allocate spectrum for

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[6] *See* Sue Marek, *Colorado Will Be First With C-V2X Vehicle Deployment*, SDXCentral (Jun. 5, 2018), https://www.sdxcentral.com/articles/news/colorado-will-be-first-with-c-v2x-vehicle-deployment/2018/06/.

[7] Georgia Department of Transportation, Press Release, *Georgia DOT Prepares Transportation Infrastructure for Imminent Adoption of Connected Vehicle Technology* (Feb. 6, 2020), https://news.transportation.org/Pages/StateDotNewsDetail.aspx?MessageId=75963.

[8] University of Michigan Transportation Research Institute, *Simultaneous Deployment of C-V2X and DSRC in Ann Arbor Connected Environment* (Dec. 12, 2019), http://www.umtri.umich.edu/-what-were-doing/in-the-news/simultaneous-deployment-c-v2x-and-dsrc-ann-arbor-connected-environment.

[9] Press Release, Audi, *Audi of America, Virginia DOT and Qualcomm Announce Initial C-V2X Deployment in Virginia* (Jan. 22, 2020), https://media.audiusa.com/en-us/releases/384.

[10] United States Department of Transportation, Federal Highway Administration, *U.S. Department of Transportation Awards More Than $6.8 Million to Hawaii's Cellular V2X Technology Project* (June 16, 2020), https://cms8.fhwa.dot.gov/newsroom/us-department-transportation-awards-more-68-million-hawaiis-cellular-v2x-technology.

[11] Ministry of Industry and Information Technology of the People's Republic of China, MIIT No. 203 regulation (Nov. 2018). *See also* Stephen Lawson, *C-V2X's Momentum in China May Drive Connected-Car Development*, TU-Automotive (Nov. 7, 2018), https://www.tu-auto.com/c-v2xs-momentum-in-china-may-drive-connected-car-development/; Monica Alleven, *Qualcomm expects C-V2X commercial rollouts in 2019, cites progress in China*, FierceWireless (Nov. 2, 2018), https://www.fiercewireless.com/-wireless/qualcomm-expects-c-v2x-commercial-rollouts-2019-cites-progress-china.

[12] *See*, *e.g.*, Adam Frost, *Deal signed for huge V2X launch in China*, Traffic Technology Today (Feb. 27, 2019), https://www.traffictechnologytoday.com/news/connected-vehicles-infrastructure/geely-qualcomm-and-gosuncn-to-launch-5g-and-c-v2x-enabled-vehicles.html.

this technology.[13] The representatives explained that 5GAA has proposed two distinct paths for modernizing the Commission's rules to accommodate C-V2X Direct and thereby deliver the safety benefits of this technology to American consumers and travelers. Under the greatly preferred first option, the Commission would adopt its proposal to allocate the upper portion of the 5.9 GHz band for 4G-based basic C-V2X Direct services and also reallocate the lower portion of the 5.9 GHz band for 5G-based advanced C-V2X Direct services.[14]

Under the second option, which assumes the Commission reallocates the lower 45 MHz portion of the 5.9 GHz band for unlicensed operations, the Commission would (1) adopt its proposal to allocate the upper 30 MHz of the 5.9 GHz band for C-V2X Direct, (2) adopt modest safeguards on unlicensed use of the lower 45 MHz portion of the band to prevent harmful interference by such operations to C-V2X Direct,[15] and (3) identify 40 MHz of dedicated, mid-band spectrum elsewhere for 5G-based advanced C-V2X Direct.[16] The representatives also noted that the OOBE mask proposal put forward by Broadcom, CableLabs, Facebook, and NCTA in this proceeding on July 31, 2020[17] is inadequate to protect C-V2X Direct from harmful interference caused by unlicensed devices operating in the lower 45 MHz of the 5.9 GHz band.[18]

Pursuant to the Commission's rules, this notice is being filed in the above-referenced docket for inclusion in the public record. Please contact me should you have any questions.

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[13] *See Use of the 5.850-5.925 GHz Band*, Notice of Proposed Rulemaking, 34 FCC Rcd 12603, 12613 ¶ 24 (2019).

[14] *See* Comments of 5GAA, ET Docket No. 19-138, at 22-45 (filed Mar. 9, 2020) ("5GAA Comments").

[15] *See* Letter from Sean T. Conway, Counsel to the 5G Automotive Association, to Marlene H. Dortch, Secretary, FCC, ET Docket 19-138 at 4-5 (filed Aug. 6, 2020) ("5GAA Aug. 6 Ex Parte") (explaining 5GAA's workable approach for accommodating both interference-free C-V2X Direct safety services and robust unlicensed operations).

[16] *See* 5GAA Comments at 22-45*; see also* Reply Comments of 5GAA, ET Docket No. 19-138, at 12, 17-21 (filed Apr. 27, 2020).

[17] *See* Letter from Chris Szymanski et al., Broadcom, to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket No. 19-138 (filed July 31, 2020).

[18] *See* 5GAA Aug. 6 Ex Parte at 4-5.

Sincerely,

/s/ Sean T. Conway
Sean T. Conway

Counsel to the 5G Automotive Association

cc: Bill Davenport, Chief of Staff and Senior Legal Advisor to Commissioner Geoffrey Starks